DOCUMENT RESUME

ED 284 658 PS 016 678

AUTHOR	Pendleton, Audrey
TITLE	Preschool Enrollment: Trends and Implications. Center for Education Statistics Issue Paper.
INSTITUTION	Center for Education Statistics (OERI/ED), Washington, DC.
REPORT NO	CS-87-424
PUB DATE	86
NOTE	20p.; Reprinted from: "The Condition of Education," 1986 edition; see ED 277 162.
PUB TYPE	Viewpoints (120)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Economic Status; Employed Women; *Enrollment Influences; *Enrollment Trends; *Preschool Education; School Demography; School Readiness
IDENTIFIERS	*Increasing Enrollment

ABSTRACT

This paper looks at the increase in preschool enrollment from 1970 to 1985. Family characteristics and how they relate to enrollment trends for three- and four-year-olds are examined. The implications of these patterns of enrollment are discussed in conjunction with expected changes in the demographic characteristics of preschool children in the coming decade. (PCB)

COMPLETED

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

MAY 9 1988

ED 1.310/2:2846-58

ED284658

Center for Education Statistics

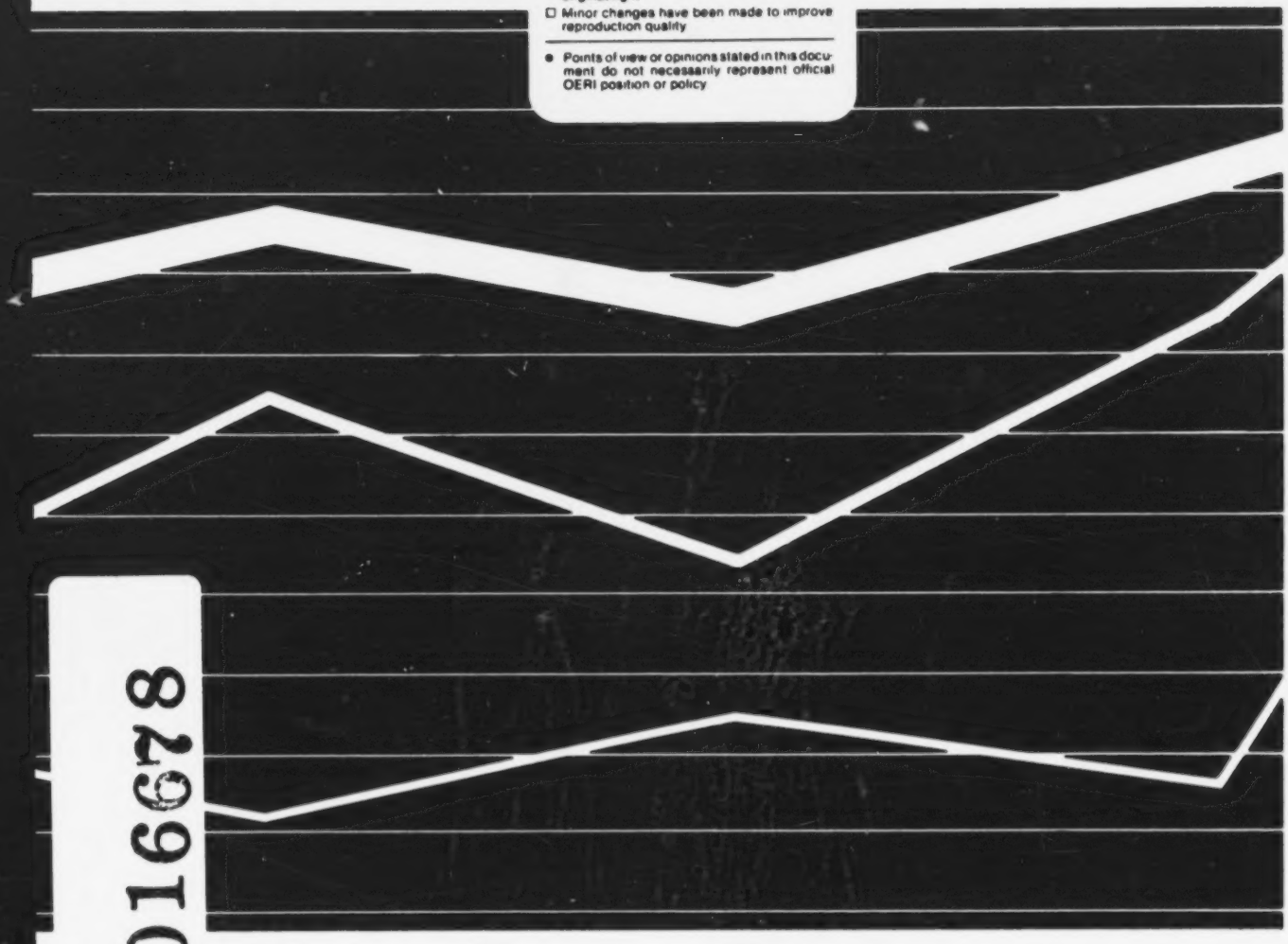
Pre-School Enrollment: Trends and Implications

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy



PS 016678

Issue Paper

Office of Educational Research and Improvement
U.S. Department of Education

ORIGINAL

This report is reprinted from *The Condition of Education*, 1986 edition, published by U.S. Department of Education's Center for Education Statistics (CES). Copies of *Condition* are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. To order, send a check or money order for $13 and refer to stock number 065-000-00276-1.

Center for Education Statistics

"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."—Section 406 (b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

Preschool Enrollment: Trends and Implications

by Audrey Pendleton

Overview

Preschool enrollment has risen dramatically during the 1970's and 1980's and is expected to continue to rise in the next decade. While preschool programs are most effective for disadvantaged children, preschool enrollment rates have been higher among the more affluent segments of society. However, there is increasing interest in providing public preschool programs for disadvantaged 4-year-olds.

This paper examines trends over time in enrollment patterns for 3- and 4-year-olds; most 5-year-olds are enrolled in either kindergarten or first grade. It looks at family characteristics associated with preschool enrollment and how those characteristics might be related to past increases in preschool enrollment. The implications of these patterns of preschool enrollment are discussed in conjunction with expected changes in the demographic characteristics of preschool children in the coming decade. The major findings are:

Enrollment Trends

- The number of 3- and 4-year-olds enrolled in preschool increased steadily between 1970 and 1985, even though the size of that age group declined for part of the period, because larger proportions of children were enrolled.

- Preschool enrollment is projected to continue to increase during the next decade due both to an increasing number of children in this age group and to increases in the proportion enrolled in preschool.

Family Characteristics

- Enrollment rates for black 3- and 4-year-olds are very similar to those for white children.

- Black children are more likely to attend publicly operated preschools than white children. The proportion of preschool students in public rather than private schools declines as income rises.

- The likelihood of preschool attendance for 3- and 4-year-olds rises with family income. For white children, the largest increases in enrollment rates between 1975 and 1984 occurred for high-income families.

- For black children, enrollment rates are much higher for children whose mothers work full time than for those with nonworking mothers. Among white children, those whose mothers work part time are the most likely to attend preschool.

- For white 3-year-olds, increased enrollment rates may be related to rising proportions of mothers in the labor force. However, for 4-year-olds, higher enrollment rates reflect increases for children of nonworking mothers.

Implications

- Differences in school readiness among kindergarten and first-grade students may be increasing as substantial proportions of children have had preschool experience while many others have not.

- Further accentuating the challenge to the schools of meeting the needs of their diverse student bodies are differences in the family backgrounds of students who have and have not attended preprimary school. Preschool attendance is higher and increasing for children from affluent families.

Data

While there is a wide variety of settings in which preschool-age children are socialized and educated, the only national data that allow an analysis of trends over time relate to preschool enrollments and come from the School Enrollment Supplement to the Current Population Survey (CPS) in October of each year. The CPS question regarding school enrollment for 3- and 4-year-olds is phrased "Is (the child) attending or enrolled in nursery school or kindergarten?" Only if the respondent voices some doubt about what constitutes school enrollment does the interviewer provide any further explanation about what is meant by school enrollment. The interviewer's instructions state that school enrollment consists of attendance or enrollment

> "in any type of regular or special school, whether day or night, public or private for at least two hours per day. . . . A nursery school is a group or class that is organized to provide education experiences for children

during the year or years preceding kindergarten. These sometimes are called 'preschool groups' or 'prekindergarten.' A nursery class may be organized as part of an elementary school or as a separate school. Private homes in which essentially custodial care (babysitting) is provided for one or more children are *not* considered nursery schools. The nursery school, as defined here, includes instruction as an important and integral phase of its program of child care" (U.S. Department of Commerce, 1982).

People may respond to the CPS item based on varying interpretations of what constitutes a nursery school or instruction.

- Some may consider a wide range of settings and activities as schools.
- Others may respond on the basis of a more limited definition, such as a program of formal instruction in a school setting.

The CPS definition forces a dichotomy between child care and education at a time when there is increasing awareness that there is a great deal of overlap between the two. While children have a wide range of preschool group experiences, most include both child care and educational aspects. The ambiguity as to what constitutes school enrollment is exemplified by the concern of many early childhood specialists about the appropriate type of program for preschool children. Some educators believe that preschoolers are ready to begin formal schooling, while others feel that preschool programs should be based on children's need for mental, physical, and social activity and must revolve around play activities (Seefeldt, 1985; Zigler, in press).

Trends in Preprimary Enrollment

The number of 3- and 4-year-olds enrolled in school rose steadily during the 1970's despite a decline during the late seventies in the size of the age group. The enrollment growth reflected an increase in the *rate* of preschool enrollment for this age group between 1970 and 1985, from 21 percent to 39 percent (Figure 1).

- Four-year-olds are more likely than 3-year-olds to be enrolled in preschool.
- The majority of both 3- and 4-year-olds who are enrolled attend private school.
- A larger proportion of 4-year-olds who are enrolled attend public school than 3-year-olds, but that difference narrowed between 1970 and 1984 (U.S. Department of Education, 1985a).

In the early 1980's, the growth in the numbers of 3- and 4-year-olds enrolled in school has been fueled by both larger population size and higher enrollment rates. Both factors are expected to result in continued increases in the number of 3- and 4-year-olds enrolled in preprimary school during the next decade (U.S. Department of Education, 1985a, 1985b).

Several factors may have contributed to the increasing rates of preprimary school attendance. One is an increasing awareness of children's learning potential in early childhood (Berruta-Clement et al., 1984; Bloom, 1964; Lazar and Darlington, 1982; Piaget, 1969).

Another factor often cited is the rise in the labor force participation of women. The proportion of married women with children under the age of 6 who work rose from 30.3 percent in 1970 to 51.8 percent in 1984 (U.S. Department of Commerce, 1985). While rising labor force participation has increased the need for child care services, that care does not necessarily involve participation in preschool. Indeed, only 15 percent of employed mothers with children under the age of 5 used group care centers as their principal child care arrangement in 1982; an additional 13 percent used group care centers as a secondary child care arrangement (U.S. Department of Commerce, 1983).

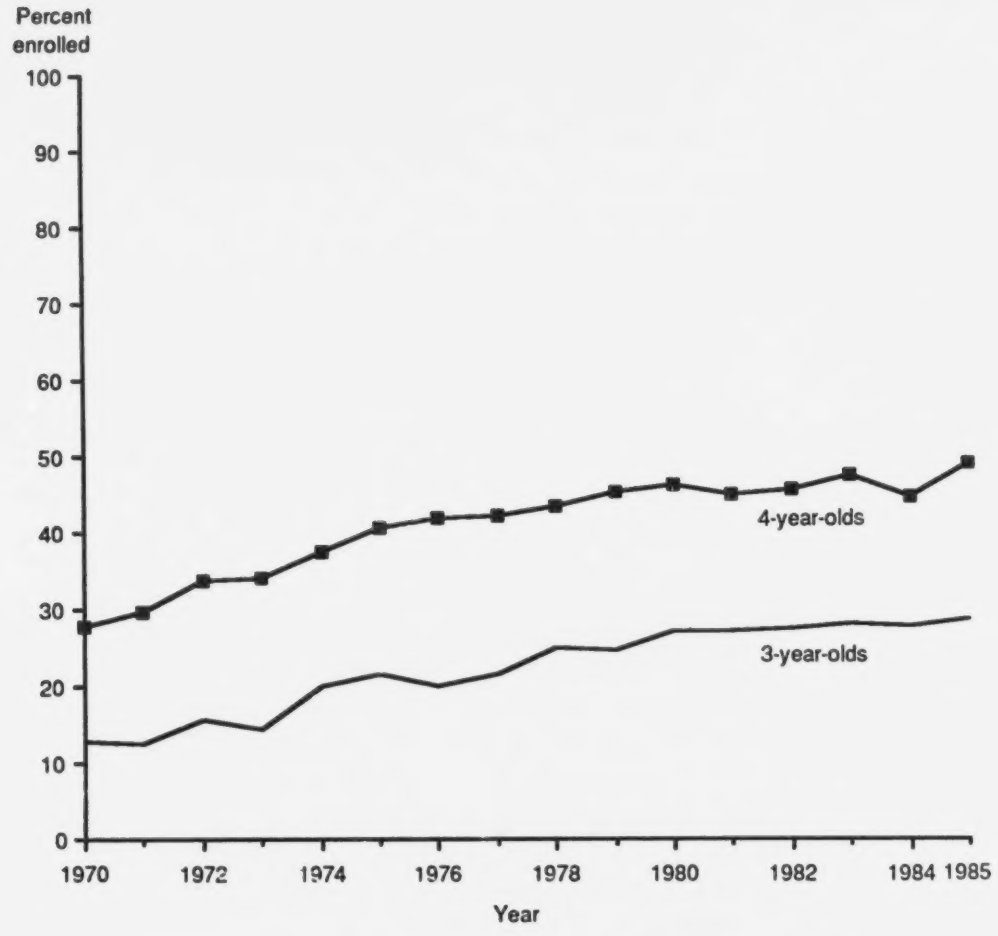
The next two sections investigate family characteristics, including working status of the mother, as possible predictors of enrollment in a preschool program. The first examines such patterns for 1984 and the second investigates changes between 1975 and 1984. Because of differences in enrollment patterns for 3- and 4-year-olds, the analysis will often be displayed separately for the two ages.

Family Background and Preschool Attendance

1984 patterns

Race and Income. Preschool attendance rates for 3- and 4-year-olds are not significantly different for

FIGURE 1 -- Trends in school enrollment of 3- and 4-year-olds



SOURCE: U.S. Department of Education, National Center for Education Statistics, *Preprimary Enrollment*, various years. U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Series P-20, various years, and unpublished data.

blacks and whites.[1] However, there are differences in the types of schools they attend (Table 1).

- Black children are more likely than whites to be enrolled in public preschool at all levels of family income.

- At both age 3 and 4, for blacks the proportion of preschool attendance in public school is approximately twice that for whites—one-half vs. one-fourth for age 3 and two-thirds vs. one-third for age 4.

Income is likely to be related to preschool attendance patterns for two reasons. As an indicator of general socioeconomic status, it may be linked to the probability that a child will be enrolled in a preschool program. In addition, because of the cost factor involved in private schools and eligibility criteria for some public programs, income may be related to the choice of a public or private preschool. Both patterns appear in the data presented in Table 1.

For white children, there is a strong relationship between income and preschool enrollment patterns for both 3- and 4-year-olds.

- As income rises, so does the likelihood that a child will be enrolled in preschool.

- The proportion of preschool students who are attending a private school also increases with income.

Relationships between family income and preschool enrollment exist for black children, but are not as strong as for whites.

- School enrollment increases with income for black 3-year-olds, but not for 4-year-olds.

- The likelihood of enrollment in a private school increases with income, particularly for black 3-year-olds.

The differences in enrollment rates between blacks and whites at the same income level in Table 1 should be viewed cautiously. The sample of black children is small, and the differences are not statistically significant.[2]

The relationships between school enrollment rates and other measures of socioeconomic status, such as educational attainment of the head of household, are very similar to the patterns observed between school enrollment and family income for both whites and blacks. As socioeconomic status rises, so does the likelihood that a child will be enrolled in preschool and that the preschool will be a private school.

Table 1

Percent of 3- and 4-year-olds enrolled in preschool by family income, control of school, race, and age: 1984

Family income and control of school	White		Black	
	Age 3	Age 4	Age 3	Age 4
Total	28.5	48.9	34.3	44.1
Public	7.4	16.0	19.1	27.9
Private	21.1	32.9	15.3	16.2
Less than $10,000	14.6	34.7	24.8	40.0
Public	9.7	22.9	21.1	31.8
Private	4.9	11.8	3.7	8.2
$10,000–$19,999	17.4	37.9	35.8	47.6
Public	6.4	15.5	14.7	23.2
Private	11.0	22.4	21.1	24.4
$20,000 and over	37.9	57.8	51.5	47.8
Public	7.2	14.2	15.0	24.2
Private	30.7	43.6	36.5	23.6

NOTE: Detail may not add to total due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1984, special tabulations.

While there may be no difference in preschool programs between public and private schools, several researchers (Coleman et al., 1966; Zigler, in press) have suggested that there are educational advantages to mixed socioeconomic and racial settings. The pattern of public and private preschool enrollments presented here, with disadvantaged children enrolling in public school and more affluent children enrolling in private school, does not bring together children from diverse social and ethnic backgrounds.

Mother's labor force participation. The increased labor force participation of mothers with young children is often cited as a major factor in rising preprimary school enrollment. Mother's work status is related to a child's preschool attendance, but the relationships are somewhat complicated (Table 2).

- White 3-year-olds whose mothers work *part* time are the most likely to attend preschool. Those whose mothers work full time are more likely to be enrolled than those whose mothers do not work.

- Among white 4-year-olds, children whose mothers work part time are more likely to be enrolled than those whose mothers work full time. There is no difference in the likelihood of school enrollment between those whose mothers work full time and those whose mothers do not work at all.

The school enrollment patterns of black 3- and 4-year-olds are more consistent with the hypothesis that labor force participation of women is related to preschool enrollment.

- Black children whose mothers work full time have substantially higher rates of preschool enrollment than those whose mothers do not work.

- It is not possible to look at the preschool enrollment patterns of black children whose mothers work part time due to the small sample size.

The availability of preschool programs, particularly full-day programs, may be a factor in the preschool enrollment of children whose mothers are employed. It may also affect the likelihood of employment for mothers of preschool-aged children and whether they work full or part time. If part-day preschool programs are more readily available than full-day programs, families may opt for full-day care in other settings. However, there are no national data on the demand for or availability of preschool programs.

Whether preschool students are enrolled in school full- or part-day is associated with the work status of the mother for both black and white children (Table 3).

Table 2

Percent of 3- and 4-year-olds enrolled in preschool by mother's work status, control of school, race, and age: 1984

Mother's work status and control of school	White		Black	
	Age 3	Age 4	Age 3	Age 4
Not working	21.7	48.2	27.3	36.8
Public	7.2	18.3	21.6	30.2
Private	14.5	30.0	5.6	6.7
Working full time	33.1	46.6	46.6	59.9
Public	6.1	14.0	14.5	28.0
Private	27.0	32.7	32.1	31.9
Working part time	41.8	56.0	—	—
Public	10.3	15.0	—	—
Private	31.5	41.0	—	—

—Not included due to small sample size.

NOTE: Detail may not add to total due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1984, special tabulations.

Table 3

Percent of 3- and 4-year-old preschool students enrolled full day by mother's work status and race: 1984

Mother's work status	White	Black
Not working	12.1	47.8
Working full time	56.9	74.8
Working part time	20.2	—

—Not included due to small sample size.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1984, special tabulations.

- Children with full-time working mothers are considerably more likely to attend preschool for the full day than children whose mothers are not working or are working part time.

- However, approximately half the white children whose mothers work full time are enrolled in school only part day.

- For each category of work status, black children are more likely than white to be enrolled full day.

Perhaps ambiguity as to what is considered a full- versus part-day program accounts in part for the second finding. A respondent to the CPS may consider a group program of instruction in the morning and child care in the afternoon as either a full- or part-day program. However, it may also be that part-day preschool programs are more available than full-day programs. It may be easier for a full-time working mother to find a single provider for full-day child care than to organize multiple child care arrangements that include a part-day preschool program.

However, there is some evidence from the June 1982 Current Population Survey that many working mothers have multiple child care arrangements. Of children under 5 years of age whose principal child care arrangement was in a group care center (including nursery schools and day-care centers), 20 percent also had a secondary source of care while the mother was working. The secondary source of child care was the father in 14 percent of the cases and another relative in 51 percent of the cases (U.S. Department of Commerce, 1983).

Single-parent households. Another factor thought to be related to preschool attendance is whether or not both parents are present in the household. The presence of two parents may affect both the likelihood of the mother's employment and the level of family income. In this sample of 3- and 4-year-olds, being a single parent (widowed, divorced, separated, or never married) increases the likelihood of working for white mothers, but not for black mothers. The family income in single-parent households is much lower than in households where both parents are present.

In spite of the differences in work status and family income between single mothers and mothers who are married with husband present, the mother's marital status generally is not related to school enrollment rates or full- vs. part-day attendance for white and black 3- and 4-year-olds. However, for some subgroups (whites with nonworking mothers and blacks with full-time working mothers), children are more likely to attend a private preschool when their mother is married, spouse present, than when their mother is a single parent (Table 4).

The Current Population Survey cannot provide direct insights about the factors contributing to the increase in preprimary enrollment, since the data represent enrollment patterns at single points in time. However, some clues about possible contributory factors may be gained by comparing such patterns over time. In the next section, the family characteristics used in the analysis of 1984 enrollment patterns will be related to preschool enrollment in 1975 and the patterns in the 2 years will be compared.[3]

Changes from 1975 to 1984

The analysis of factors related to the changes in preprimary school enrollment of 3- and 4-year-olds which follows is based on data from the School Enrollment Supplement to the Current Population Sur-

Table 4

Percent of 3- and 4-year-olds enrolled in preschool by mother's work status, control of school, race, and mother's marital status: 1984

Mother's work status and control of school	White		Black	
	Married, husband present	All others	Married, husband present	All others
Not working	35.5	31.1	30.9	32.2
Public	11.7	22.0	25.1	26.0
Private	23.9	9.1	5.9	6.3
Working full time[1]	40.3	36.2	55.6	50.9
Public	9.6	11.8	16.9	25.7
Private	30.7	24.5	38.7	25.2

[1]Working part time not included due to small sample size.

NOTE: Detail may not add to total due to rounding.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1984, special tabulations.

veys of October 1975 and 1984. The results are presented for white children only. The relationships between the factors examined in the previous section and school enrollment rates for black children are consistent in all years analyzed. However, the actual levels of enrollment for black children reported for various years are somewhat erratic. The standard errors are also large, rendering many of the differences between 1975 and 1984 statistically insignificant.

Preprimary school enrollment rates increased substantially for white children between 1975 and 1984, from 22 percent to 28 percent for 3-year-olds and from 41 to 49 percent for 4-year-olds (Table 5). This increase in total preprimary school enrollment reflects rises in both public and private school enrollment for 3-year-olds, but for 4-year-olds the increase was entirely attributable to higher private school enrollment.

Income. In the preceding section, family income was shown to be related in 1984 both to the likelihood of preschool enrollment and to whether that enrollment was in a public or private setting. Children from families with higher incomes were more likely to be enrolled in preschool and more likely to be enrolled in private schools than children from lower income families.

Between 1975 and 1984 there was a significant change in family income levels for preschool-aged children. In 1975, 11 percent of white 3- and 4-year-olds had a family income under $5,000 (the poverty level for a nonfarm family of four was $5,500). By 1984, 17 percent had a family income under $10,000 (the poverty level was $10,609). A larger proportion of white preschool children were living in poverty in 1984 than in 1975, but there was no change in the preschool enrollment rates for poor children between 1975 and 1984.

- Preschool enrollment increased sharply in the highest income category for both 3- and 4-year-olds.
- Enrollment also increased for 4-year-olds in families with incomes just above the poverty level (Table 5).

Thus the rise in preschool participation for white children has been more characteristic of higher income segments of society.

Labor force participation. Between 1975 and 1984 the proportion of white mothers working full time rose by about one-half for both 3- and 4-year-olds, and almost doubled at higher levels of family income. The proportion of 3-year-olds whose mothers worked part time also increased by about one-half. The higher labor force participation of women with young children is often cited as a factor in rising preprimary school enrollment. The CPS data suggest this is only partially true (Table 6).

- Attendance rates are generally higher for children with working mothers, especially for 3-year-olds.
- However, the only significant increase in enrollment rates between 1975 and 1984 was for 4-year-olds whose mother did not work.

For 3-year-olds, the increase in enrollment rates may be associated with *changes in the work status of mothers*, but this is not the case for 4-year-olds. There is no difference in the 1984 enrollment rates between 4-year-olds whose mothers do not work and those whose mothers work full time.

- The increase in enrollment rates for 4-year-olds reflects *rising enrollment rates for children of nonworking mothers.*

Single-parent households. The presence of two parents in the household is thought to be related to preschool enrollment through associations with the likelihood of the mother's employment and the level of family income. While both divorce rates and rates of premarital pregnancy have risen in recent years, CPS data show that among all households containing white 3- and 4-year-old children, the proportion of mothers who were married with spouse present did not change significantly between 1975 and 1984 (90 and 88 percent respectively). This pattern is consistent with research reporting a relatively low likelihood of divorce for parents with preschool-aged children (Glick, 1979).

- Enrollment rates of children whose mothers were married, husband present, and those whose mothers were single parents did not differ in 1975 or 1984.

- The only increase in preschool enrollment rates between 1975 and 1984 was for children whose mother was married, husband present, and not working (Table 7).

Implications

The factors associated with increasing preprimary school enrollment for white children were somewhat unexpected. Increases in enrollment rates of 3- and 4-year-old children for the most part occurred in families at upper income levels. For 3-year-olds, the increasing labor force participation of women was associated with increased preprimary school enrollment. However, that was not the case for 4-year-olds. While more mothers of 4-year-olds worked in 1984 than in 1975, the children of full-time working mothers were no more likely to be enrolled in school than those of

Table 5

Percent of white 3- and 4-year-olds enrolled in preschool by family income and age: 1975 and 1984

1975			1984		
Family income	Age 3	Age 4	Family income	Age 3	Age 4
Total	21.9	40.6	Total	28.5	48.9
Less than $5,000	12.7	32.2	Less than $10,000	14.6	34.7
$5,000–$9,999	14.3	27.6	$10,000–$19,999	17.4	37.9
$10,000–$14,999	20.9	40.1	$20,000–$29,999	23.7	47.2
$15,000 and over	32.3	53.4	$30,000 and over	48.9	65.9

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1975 and 1984, special tabulations.

Table 6

Percent of white 3- and 4-year-olds enrolled in preschool by mother's work status and age: 1975 and 1984

	1975		1984	
Mother's work status	Age 3	Age 4	Age 3	Age 4
Not working	18.2	37.5	21.7	48.2
Working full time	28.5	45.5	33.1	46.6
Working part time	32.5	47.2	41.8	56.0

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1975 and 1984, special tabulations.

Table 7

Percent of white 3- and 4-year-olds enrolled in preschool by mother's work status and mother's marital status: 1975 and 1984

Mother's work status	1975		1984	
	Married, husband present	All others	Married, husband present	All others
Not working	27.9	28.4	35.5	31.1
Working full time[1]	36.7	43.0	40.3	36.2

[1]Working part time not included due to small sample size.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, October 1975 and 1984, special tabulations.

nonworking mothers. In fact, it was 4-year-olds whose mothers did not work whose enrollment rates rose from 1975 to 1984.

Among 4-year-olds, factors other than increasing labor force participation of mothers account for rising preschool enrollment rates. An awareness of the educational value of preschool programs may have been a contributing factor.

Concerns about the development of social skills may also have been an element in increasing preschool enrollment. As family size has declined in recent years, there may be fewer children, not only in the home, but also in the neighborhood, available as playmates. Preschool can provide an opportunity for children to interact with others of the same age, when that opportunity is lacking in the immediate social environment.

A mother's full-time employment may make child care arrangements more difficult. The findings suggest a potential need for more full-day preschool opportunities. Among white 3-year-olds, those with mothers working part-time are most likely to be enrolled in school. While a mother's working full time increases the likelihood that a white child is enrolled for the full day, approximately half of the children with full-time working mothers attend part-day.

The findings presented here suggest a widening range in school readiness for young children. Increasing numbers of children are learning in preschool many of the social, developmental, and academic skills that have traditionally been taught in kindergarten or first grade. Many other children enter elementary school with no preschool experience. This may pose a challenge to the Nation's elementary schools: adapting to the needs of an increasingly diversified group of kindergarten and first grade students. Some students enter elementary school, for example, able to write their names, speak clearly, share toys with other children, use scissors, and read at least a few words, while other children can do none of these things. Further accentuating that challenge are differences in family background between children who attend preprimary school and those who do not.

Researchers in the field of early childhood education are recommending preschool programs for economically disadvantaged children, handicapped children, and non-English-speaking children (Zigler, in press). Although preschool programs have been shown to be most effective for economically disadvantaged children (Berruta-Clement, Schweinhart, Barnett, Epstein, and Weikart, 1984; Irvine, Flint, Hick, Horan, and Kikuk, 1982) and the proportion of such children is growing (Kaufman, 1986), the majority of poor children are not enrolled in preschool programs.

- Head Start estimates that it currently serves one out of every six eligible children (Administration for Children, Youth and Families, 1985).
- Early childhood specialists also recommend preschool programs for non-English-speaking children, but Hispanic 3-year-olds are only half as likely to be enrolled in preschool as white and black 3-year-olds.
- At the same time, the likelihood of preschool enrollment is high and is increasing for children in families of higher socioeconomic status.

If these trends continue, differences in school readiness among population subgroups may increase in coming years. A development which could counter this trend is the growing interest at State and local levels in preschool programs for the disadvantaged (Ambach, 1985; National Governors' Association, 1985). A survey conducted in 1985 revealed that 19 States have demonstration programs for 4-year-olds. Typically, these were Federally funded and were targeted at specific groups, notably handicapped and low-income children. In addition, several States have program initiatives that extend beyond demonstration projects and involve significant funding (Kagan, 1985).

Footnotes

[1]While preschool programs have been recommended for non-English-language children, the 15 percent enrollment rate for Hispanic 3-year-olds is half that of white and black 3-year-olds. Thirty-four percent of Hispanic 4-year-olds are enrolled in preschool. Hispanic children tend to be enrolled in public programs: for 3-year-olds, 9 percent attend public preschool programs and 6 percent are in private preschools, and for 4-year-olds, 25 percent and 9 percent attend public and private preschools respectively. Due to the small sample of Hispanics, the examination of family characteristics associated with preschool attendance is limited to non-Hispanic whites and blacks.

[2]Table 1 demonstrates one drawback to the use of the Current Population Survey for this analysis: the relatively small size of the sample of 3- and 4-year-olds. (See Table A1 for sample sizes.) As a result, the standard errors of estimates are often large. Differences between subgroups that may appear substantial to the reader may in fact not be statistically significant.

[3]Data from the School Enrollment Supplement to the October 1982 Current Population Survey were also analyzed. Patterns of preschool enrollment are very similar for 1982 and 1984.

Appendix

Definitions and Explanations

Full or part day. Part-day attendance refers to children who attend either in the morning or in the afternoon, but not both. Full-day attendance refers to those who attend both in the morning and afternoon. It is possible for a child to be enrolled in school full day, but less than five days per week.

Family income. Income represents the annual total money income of the family before deductions for personal taxes, Social Security, bonds, etc. For this analysis, family income was grouped based on the unweighted frequency distributions by race, the poverty level cutoffs, and the Consumer Price Indices for 1975 and 1984. The poverty level cutoff for a nonfarm family of four was $5,500 in 1975 and $10,609 in 1984. The Consumer Price Index for urban areas showed a comparable change, rising from 161.2 in 1975 to 311.1 in 1984. In 1975, 10.5 percent of white families containing 3- and 4-year-old children had an income under $5,000, 21.8 percent had an income of $5,000 to $9,999, 32.8 percent an income of $10,000 to $14,999, and 29.1 percent had an income of $15,000 or more.

The dollar amount of the family income categories for 1975 was doubled based on the change in the poverty level cutoffs and the Consumer Price Indices in order to obtain income categories for the 1984 data. The result was a reasonably similar distribution of the unweighted sample of white families with 3- and 4-year-old children in 1984 for analysis purposes. Sixteen percent of such white families had an income less than $10,000, 28 percent had an income of $10,000 to $19,999, 33.5 percent an income of $20,000 to $29,999, and 19.4 percent had an income of $30,000 or more. The unweighted distribution of black families containing 3- and 4-year-old children by family income in 1984 was 51.6 percent with an income under $10,000, 25.6 percent with an income of $10,000 to $19,999, and 20.5 percent with an income of $20,000 or more. Family income was not reported for 5.8 percent of such white families in 1975 and 3.1 percent in 1984, or for 2.3 percent of black families in 1984.

Mother's work status. The mother of the children in this analysis cannot be positively identified since the Current Population Survey is a sample of households and the record for each person contains the relationship to the head of household. The person in the household identified here as the mother is either the spouse of a male head of household or a female head of household. This operationalization is reasonable for white children, of whom 93 percent were the own child of the head of household, but less valid for black children, of whom only 79 percent were the own child of the head of household in 1984. Another 5 percent of white children and 19 percent of black children were another relative of the head of household. Both white and black children are less likely to be the own child of the head of household when the head is female than when the head is male. Detailed relationship to the head of household was not available for 1975.

The "not working" category of mother's work status includes women who were not in the labor force and those who were unemployed. "Working full time" includes those working 35 or more hours per week, and "working part time" includes those working less than 35 hours per week.

Single-parent households. The person identified as the head of the household, and referred to as a parent, is not necessarily related to the 3- or 4-year-olds of interest. Ninety-three percent of white children and 79 percent of black children were the own child of the head of household in 1984. An additional 5 percent of white children and 19 percent of black children were another relative of the head of household. Detailed relationships to the head of household were not available for 1975. While single parents are not necessarily mothers, all the households containing 3- and 4-year-old children in both the October 1975 and 1984 samples included either (1) the wife of a male head of household who was married, spouse present or (2) a female head of household who was not married, spouse present, (i.e., married, spouse absent—including separated; divorced, widowed, or never married).

School enrollment. Children who were reported as enrolled in school had attended or been enrolled in any type of regular or special school, including nursery school and kindergarten, for at least 2 hours per day at any time during that term or school year. A nursery school is defined by the Bureau of the Census as ". . . a group or class organized to provide educational experiences for children during the year or years preceding kindergarten. . . . A nursery class may be organized as part of an elementary school or as a separate school. Private homes in which essentially custodial care (babysitting) is provided for one or more children are *not* considered nursery schools. The nursery school, as defined here, includes instruction as an important and integral phase of its pro-

gram of child care." It should be noted that the item on the questionnaire regarding school enrollment was phrased "Is (the child) attending or enrolled in nursery school or kindergarten?" The definition was not routinely given unless the respondent voiced some doubt as to what constituted school enrollment.

Reliability of Estimates

All comparisons cited in the text are statistically significant at the 0.05 level of significance. This means that the difference between two sample estimates is greater than 1.96 times the standard error of the difference.

Table A1

Standard errors (and unweighted numbers) for Table 1: Percent of 3- and 4-year-olds enrolled in preschool by family income, control of school, race, and age: 1984

Family income and control of school	White		Black	
	Age 3	Age 4	Age 3	Age 4
Total	1.3	1.5	3.4	3.5
Public	0.8	1.1	2.9	3.2
Private	1.3	1.4	2.5	2.5
N	(1818)	(1808)	(352)	(307)
Less than $10,000	2.5	3.7	4.3	4.7
Public	2.4	3.5	4.3	4.4
Private	1.8	2.4	1.3	2.2
N	(301)	(281)	(178)	(162)
$10,000–$19,999	2.2	2.8	6.6	7.3
Public	1.3	2.2	5.0	6.3
Private	1.8	2.5	5.7	6.3
N	(515)	(501)	(88)	(81)
$20,000 and over	2.5	2.0	8.3	8.3
Public	1.0	1.5	5.1	7.2
Private	1.9	2.1	7.5	7.2
N	(949)	(968)	(78)	(57)

Table A2

Standard errors (and unweighted numbers) for Table 2: Percent of 3- and 4-year-olds enrolled in preschool by mother's work status, control of school, race, and age: 1984

Mother's work status and control of school	White		Black	
	Age 3	Age 4	Age 3	Age 4
Not working	2.3	2.4	4.5	4.8
Public	1.1	1.9	4.5	4.6
Private	1.7	2.1	2.3	2.3
N	(907)	(876)	(182)	(142)
Working full time	2.6	3.0	6.3	5.9
Public	1.3	1.8	4.3	5.4
Private	2.5	2.8	5.6	5.6
N	(522)	(511)	(124)	(120)
Working part time	3.3	3.4	—	—
Public	2.1	2.1	—	—
Private	3.1	3.4	—	—
N	(329)	(359)	(30)	(34)

—Not included due to small sample size.

Table A3

Standards errors (and unweighted numbers) for Table 3: Percent of 3- and 4-year-old preschool students enrolled full day by mother's work status and race: 1984

Mother's work status	White	Black
Not working	1.8	6.3
N	(576)	(109)
Working full time	3.4	5.4
N	(373)	(124)
Working part time	2.9	—
N	(312)	(25)

—Not included due to small sample size.

Table A4

Standard errors (and unweighted numbers) for Table 4: Percent of 3- and 4-year-olds enrolled in preschool by mother's work status, control of school, race, and mother's marital status: 1984

Mother's work status and control of school	White		Black	
	Married, husband present	All others	Married, husband present	All others
Not working	1.4	4.4	5.6	4.1
Public	1.0	4.3	5.4	3.9
Private	1.3	3.0	2.8	2.0
N	(1584)	(199)	(128)	(196)
Working full time	2.3	4.5	6.1	6.3
Public	1.4	3.0	4.3	5.4
Private	2.0	4.3	5.8	5.4
N	(862)	(171)	(125)	(119)
Working part time	—	—	—	—
Public	—	—	—	—
Private	—	—	—	—
N	(641)	(47)	(30)	(34)

—Not included due to small sample size.

Table A5

Standard errors (and unweighted numbers) for Table 5: Percent of white 3- and 4-year-olds enrolled in preschool by family income and age: 1975 and 1984

1975			1984		
Family income	Age 3	Age 4	Family income	Age 3	Age 4
Total	1.1	1.1	Total	1.3	1.5
N	(1984)	(2204)	N	(1818)	(1808)
Less than $5,000	2.5	3.8	Less than $10,000	2.5	3.7
N	(162)	(167)	N	(301)	(281)
$5,000–$9,999	1.7	2.5	$10,000–$19,999	2.2	2.8
N	(341)	(361)	N	(515)	(501)
$10,000–$14,999	1.8	2.0	$20,000–$29,999	3.0	3.5
N	(500)	(555)	N	(427)	(426)
$15,000 and over	2.7	1.7	$30,000 and over	3.0	2.8
N	(442)	(495)	N	(522)	(542)

Table A6

Standard errors (and unweighted numbers) for Table 6: Percent of white 3- and 4-year-olds enrolled in preschool by mother's work status and age: 1975 and 1984

	1975		1984	
Mother's work status	Age 3	Age 4	Age 3	Age 4
Not working	1.7	1.7	2.3	2.4
N	(1042)	(1058)	(907)	(876)
Working full time	2.5	2.9	2.6	3.0
N	(282)	(349)	(522)	(511)
Working part time	3.8	3.3	3.3	3.4
N	(181)	(256)	(329)	(359)

Table A7

Standard errors (and unweighted numbers) for Table 7: Percent of white 3- and 4-year-olds enrolled in preschool by mother's work status and mother's marital status: 1975 and 1984

	1975		1984	
Mother's work status	Married, husband present	All others	Married, husband present	All others
Not working	1.1	3.6	1.4	4.4
N	(1944)	(156)	(1584)	(199)
Working full time	2.3	4.1	2.3	4.5
N	(513)	(118)	(862)	(171)
Working part time	—	—	—	—
N	(412)	(25)	(641)	(47)

—Not included due to small sample size.

References

Ambach, G. (1985, March 10). "Public School for Four Year Olds, Yes or No?" Paper presented at the meeting of the American Association of School Administrators, New York, NY.

Berruta-Clement, J., Schweinhart, L., Barnett, W., Epstein, A., & Weikart, D. (1984). *Changed lives*. Ypsilanti, MI: The High/Scope Press.

Bloom, B. (1964). *Stability and change in human characteristics*. New York: John Wiley & Sons, Inc.

Coleman, J., Campbell, E., Hobson, C., McPartland, J., Mood, A., Weinfeld, F., & York, R. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Government Printing Office.

Glick, P. (1979). Children of divorced parents in demographic perspective. *Journal of Social Issues, 35*, 170-182.

Irvine, D., Flint, D., Hick, T., Horan, M., & Kikuk, S. (1982). *Evaluation of the New York State Experimental Preschool Program: Final report*. Albany, NY: The State Education Department.

Kagan, S. (1985, December 11). 4-year-olds and the schools. *Education Week*, p. 24.

Kaufman, P. (1986). Trends in elementary and secondary public school enrollment. In *The condition of education: 1986 edition*. Washington, DC: U.S. Government Printing Office.

Lazar, I., & Darlington, R. (1982). Lasting effects of early education: A report from the Consortium for Longitudinal Studies. *Monographs of the Society for Research in Child Development* 47(2-3, Serial No. 195).

National Governors' Association. (1985, September 24). *Briefing book for education*. Washington, DC: Author.

Piaget, J. (1969). *The psychology of the child*. New York: Basic Books.

Seefeldt, C. (1985, May). Tomorrow's kindergarten, pleasure or pressure? *Principal, 64*(5), 12-15.

U.S. Department of Commerce, Bureau of the Census. (1982, October). CPS interviewer's memorandum No. 82-21, Section II.

U.S. Department of Commerce, Bureau of the Census. (1983). *Child care arrangements of working mothers: June 1982* (Current Population Reports, Series P-23, No. 129). Washington, DC: U.S. Government Printing Office.

U.S. Department of Commerce, Bureau of the Census. (1985). *Statistical abstract of the United States: 1986* (106th edition). Washington, DC: U.S. Government Printing Office.

U.S. Department of Education, National Center for Education Statistics. (1985a). *The condition of education, 1985 edition*. Washington, DC: U.S. Government Printing Office.

U.S. Department of Education, National Center for Education Statistics. (1985b). *Projections of education statistics to 1992-93*. Washington, DC: U.S. Government Printing Office.

U.S. Department of Health and Human Services, Administration for Children, Youth and Families. (1985, December). *Project Head Start, Statistical fact sheet*. Washington, DC: Author.

Zigler, E. (In press). Formal schooling for four-year-olds? No. In E. Zigler and L. Kagan (Eds.), *Schooling for four-year-olds: On what grounds*. New Haven, CT: Yale University Press.